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NOTICE OF ALLOWANCE AND FEE(S) DUE

63710 7590 11/25/2008

DEAN P. ALDERUCCI
CANTOR FITZGERALD, L.P.
110 EAST 59TH STREET (6TH FLOOR)
NEW YORK, NY 10022

EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT

PAPER NUMBER

3628

DATE MAILED: 11/25/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/382,907

08/25/1999

TIMOTHY M. KEISER

99-HSX001 (CIP2)

5840

TITLE OF INVENTION: COMPUTER- IMPLEMENTED SECURITIES TRADING SYSTEM WITH VIRTUAL CURRENCY AND VIRTUAL SPECIALIST

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$0	\$0	\$755	02/25/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

63710 7590 11/25/2008

DEAN P. ALDERUCCI
CANTOR FITZGERALD, L.P.
110 EAST 59TH STREET (6TH FLOOR)
NEW YORK, NY 10022

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/382,907 08/25/1999 TIMOTHY M. KEISER 99-HSX001 (CIP2) 5840

TITLE OF INVENTION: COMPUTER- IMPLEMENTED SECURITIES TRADING SYSTEM WITH VIRTUAL CURRENCY AND VIRTUAL SPECIALIST

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional YES \$755 \$0 \$0 \$755 02/25/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
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ROBINSON BOYCE, AKIBA K 3628 705-037000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/382,907	08/25/1999	TIMOTHY M. KEISER	99-HSX001 (CIP2)	5840
63710	7590	11/25/2008	EXAMINER	
DEAN P. ALDERUCCI CANTOR FITZGERALD, L.P. 110 EAST 59TH STREET (6TH FLOOR) NEW YORK, NY 10022			ROBINSON BOYCE, AKIBA K	
			ART UNIT	PAPER NUMBER
			3628	
DATE MAILED: 11/25/2008				

Determination of Patent Term Extension under 35 U.S.C. 154 (b)

(application filed after June 7, 1995 but prior to May 29, 2000)

The Patent Term Extension is 1771 day(s). Any patent to issue from the above-identified application will include an indication of the 1771 day extension on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Extension is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	09/382,907	KEISER ET AL.	
	Examiner	Art Unit	
	AKIBA K. ROBINSON BOYCE	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communications filed 3/2/07.
2. ☒ The allowed claim(s) is/are 1,3-9,11-14 and 42-44.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Antonio Papageorgiou on 11/17/08.

The application has been amended as follows:

Claim 1 is amended as follows:

1. (amended) A method for trading a plurality of instruments in a computerized trading system that receives buy orders and sell orders for an instrument, the method comprising:

Measuring with at least one server computer an imbalance between the buy orders and sell orders for the instrument received over a given period, the buy and seller orders received from at least a first computer associated with a first trader and a second computer associated with a second trader, each of the first and second computers coupled to the at least one server computer over a communication network;
Computing with at least one server computer a projected price movement based on the measured imbalance between the number of buy and sell orders;

setting a market price for the instrument based upon the received buy and sell orders and the measured imbalance;

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automatically generating additional buy orders or sell orders for the instrument at the market price to guarantee execution of some or all of the received buy or sell orders; generating an electronic currency to execute the buy ~~and~~ or sell orders;

crediting a first trader's account with proceeds in the electronic currency for the executed sell orders by the first trader; and

debiting a second trader's account in the electronic currency for the executed buy orders by the second trader.

Claim 9 is amended as follows:

9. (amended) A computerized trading system for trading a plurality of instruments via buy orders and sell orders, comprising at least one server computer comprising program code that when executed causes the at least one server computer to perform a method comprising:

~~means for~~ measuring an imbalance between the buy orders and sell orders for an instrument received over a given period, the buy and seller orders received from at least a first computer associated with a first trader and a second computer associated with a second trader, each of the first and second computers coupled to the at least one server computer over a communication network;

~~means for~~ computing a projected price movement based on the measured imbalance between the number of buy and sell orders;

~~means for~~ setting a market price for the instrument based upon the received buy and sell orders and the measured imbalance;

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~~means for~~ automatically generating additional buy orders or sell orders for the instrument at the market price to guarantee execution of some or all of the received buy or sell orders;

~~means for~~ generating an electronic currency to execute the buy and sell orders;
and

~~means for~~ crediting a first trader's account with proceeds in the electronic currency for the executed sell orders by the first trader and ~~for~~ debiting a second trader's account in the electronic currency for the executed buy orders by the second trader.

Claim 11 is amended as follows:

11. (amended) The system according to claim 9, ~~further comprising means for the~~
program code causes the at least one server computer to perform the method that
further comprises

exchanging the electronic currency in the first or second trader's account for desired currency.

Claim 12 is amended as follows:

12. (amended) The system according to claim 9, ~~further comprising means for the~~
program code causes the at least one server computer to perform the method that
further comprises purchasing goods or services using the electronic currency in the first or second trader's account, the goods or services being offered for sale by an on-line vendor via a web site on the Internet.

Claim 14 is amended as follows:

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14. (amended) A computer-readable storage medium for storing program code ~~means for, that~~ when executed, ~~causing~~ causes at least one server a computer to perform a method for trading a plurality of instruments in a computerized trading system that receives buy orders and sell orders for an instrument, the method comprising:

measuring an imbalance between the buy orders and sell orders for the instrument received over a given period, the buy and seller orders received from at least a first computer associated with a first trader and a second computer associated with a second trader, each of the first and second computers coupled to te at least one server computer over a communication network;

computing a projected price movement based on the measured imbalance between the number of buy and sell orders;

setting a market price for the instrument based upon the received buy and sell orders and the measured imbalance;

automatically generating additional buy orders or sell orders for the instrument at the market price to guarantee execution of some or all of the received buy or sell orders; generating an electronic currency to execute the buy ~~and~~ or sell orders; crediting a first trader's account with proceeds in the electronic currency for the executed sell orders by the first trader; and

debiting a second trader's account in the electronic currency for the executed buy orders by the second trader.

The following claims have been added:

42. (New) The computer-readable storage medium according to claim 14, the method further comprising exchanging the electronic currency in the first or second trader's account for desired currency.

43. (New) The computer-readable storage medium according to claim 14, the method further comprising purchasing goods or services using the electronic currency in the first or second trader's account, the goods or services being offered for sale by on-line vendor via a web site on the Internet.

44. (New) The computer-readable storage medium according to claim 14, where in the additional buy orders or sell orders for the instrument are automatically generated at the market price if the projected price movement is greater than or equals a predetermined price movement threshold.

Allowable Subject Matter

1. Claims 1, 3-9, 11-14, and 42-44 are allowed.
2. Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office Action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.
3. The following is an examiner's statement of reasons for allowance. None of the prior art of record either individually or in combination teach the following:

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- Automatically generating additional buy orders or sell orders for an instrument at the market price to guarantee execution of some or all of the received buy or sell orders.

The present invention discloses methods and systems for trading a plurality of instruments in a computerized trading system that receives buy orders and sell orders for an instrument. The allowable feature of automatically generating additional buy orders or sell orders for an instrument at the market price to guarantee execution of some or all of the received buy or sell orders is not disclosed by any prior art reference. The closest prior art, Nymeyer (US Patent 3,581,072), shows a price computation system for commodity exchanges, stock exchanges, and similar auction markets and establishing exchange prices for any form of fungible goods in an auction market without requiring the exercise of human judgment as a substantial factor in the price determination. The next closest prior art Fernholz (US 5,819,238) discloses apparatus and methods for automatically modifying a financial portfolio having a pre-defined universe of securities. The next closest prior art, Stein, et al (US 5,826,241), discloses a method and payment system that enables a first Internet user to make a payment to a second Internet user, where cardholder accounts are used to process these payments. Newly cited art, Silverman et al (US 5,136,501) discloses a matching system for trading instruments in which bids are automatically matched against offers for given trading instruments and for automatically providing matching transactions in order to complete trades for said given trading instruments where said matching criteria further comprising an order priority based on quantity type, where a more quantity type is a hidden value of

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additional orders beyond said primary quantity a keystation is willing to trade at the same price. Newly cited art, Domowitz-I et al "Auctions as algorithms: computerized trade execution and price discovery" discloses a price model that is used to characterize the structure of the electronic order book in terms of the distributions of the number of buy and sell orders in the system and the waiting time to trade execution.

However, Nmeyer, Fernholz, Stein et al, Silverman et al and Domowitz-I et al all fail to disclose the feature of automatically generating additional buy orders or sell orders for an instrument at the market price to *guarantee* execution of some or all of the received buy or sell orders. This distinct feature has been added to independent claims 1, 9 and 14, and renders them and all claims that depend from them allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the

•Patent Application Information Retrieval (PAIR) system, Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A. R. B.
November 26, 2008

/Akiba K Robinson-Boyce/
Primary Examiner, Art Unit 3628